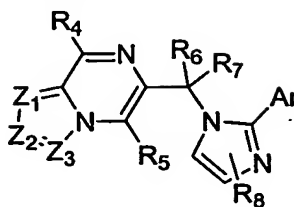


What is claimed is:

1. A compound of the Formula:



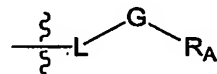
or a pharmaceutically acceptable form thereof, wherein:

Z<sub>1</sub> is nitrogen or CR<sub>1</sub>; Z<sub>2</sub> is nitrogen or CR<sub>2</sub>; Z<sub>3</sub> is nitrogen or CR<sub>3</sub>; and at least one, but no more than two of Z<sub>1</sub>, Z<sub>2</sub> and Z<sub>3</sub> are nitrogen;

Ar represents phenyl, naphthyl or 5- to 10-membered heteroaryl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, hydroxy, nitro, cyano, amino, C<sub>1</sub>-C<sub>8</sub>alkyl, C<sub>1</sub>-C<sub>8</sub>alkenyl, C<sub>1</sub>-C<sub>8</sub>alkynyl, C<sub>1</sub>-C<sub>8</sub>alkoxy, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, (C<sub>3</sub>-C<sub>7</sub>cycloalkyl)C<sub>0</sub>-C<sub>4</sub>alkyl, (C<sub>3</sub>-C<sub>7</sub>cycloalkyl)C<sub>1</sub>-C<sub>4</sub>alkoxy, C<sub>1</sub>-C<sub>8</sub>alkyl ether, C<sub>1</sub>-C<sub>8</sub>alkanone, C<sub>1</sub>-C<sub>8</sub>alkanoyl, 3- to 7-membered heterocycloalkyl, C<sub>1</sub>-C<sub>8</sub>haloalkyl, C<sub>1</sub>-C<sub>8</sub>haloalkoxy, oxo, C<sub>1</sub>-C<sub>8</sub>hydroxyalkyl, C<sub>1</sub>-C<sub>8</sub>aminoalkyl and mono- and di-(C<sub>1</sub>-C<sub>8</sub>alkyl)amino(C<sub>0</sub>-C<sub>8</sub>alkyl);

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub> are each independently selected from:

- (a) hydrogen, halogen, nitro and cyano; and
- (b) groups of the formula:



wherein:

L is a single covalent bond or C<sub>1</sub>-C<sub>8</sub>alkyl;

G is a single covalent bond, -N(R<sub>B</sub>)-, -O-, -C(=O)-, -C(=O)O-, -C(=O)N(R<sub>B</sub>)-, -N(R<sub>B</sub>)C(=O)-, -S(O)<sub>m</sub>-, -CH<sub>2</sub>C(=O)-, -S(O)<sub>m</sub>N(R<sub>B</sub>)- or -N(R<sub>B</sub>)S(O)<sub>m</sub>-; wherein m is 0, 1 or 2; and

R<sub>A</sub> and each R<sub>B</sub> are independently selected from:

- (i) hydrogen; and
- (ii) C<sub>1</sub>-C<sub>8</sub>alkyl, C<sub>2</sub>-C<sub>8</sub>alkenyl, C<sub>2</sub>-C<sub>8</sub>alkynyl, (C<sub>3</sub>-C<sub>8</sub>cycloalkyl)C<sub>0</sub>-C<sub>4</sub>alkyl, (3- to 6-membered heterocycloalkyl)C<sub>0</sub>-C<sub>4</sub>alkyl, (aryl)C<sub>0</sub>-C<sub>2</sub>alkyl or

(heteroaryl)C<sub>0</sub>-C<sub>2</sub>alkyl, each of which is substituted with from 0 to 4 substituents independently selected from halogen, hydroxy, nitro, cyano, amino, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>alkoxy, C<sub>1</sub>-C<sub>4</sub>alkanoyl, mono- and di-(C<sub>1</sub>-C<sub>4</sub>alkyl)amino, C<sub>1</sub>-C<sub>4</sub>haloalkyl and C<sub>1</sub>-C<sub>4</sub>haloalkoxy;

R<sub>5</sub> is C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>1</sub>-C<sub>4</sub>alkoxy, or mono- or di-(C<sub>1</sub>-C<sub>4</sub>alkyl)amino, each of which is substituted with from 0 to 5 substituents independently chosen from halogen, hydroxy, nitro, cyano, amino, C<sub>1</sub>-C<sub>4</sub>alkoxy, C<sub>1</sub>-C<sub>2</sub>haloalkyl, C<sub>1</sub>-C<sub>2</sub>haloalkoxy, mono- and di-C<sub>1</sub>-C<sub>4</sub>alkylamino, C<sub>3</sub>-C<sub>8</sub>cycloalkyl, phenylC<sub>0</sub>-C<sub>4</sub>alkyl and phenylC<sub>1</sub>-C<sub>4</sub>alkoxy;

R<sub>6</sub> and R<sub>7</sub> are independently hydrogen, halogen, methyl or ethyl; and

R<sub>8</sub> represents 0, 1 or 2 substituents independently chosen from halogen, hydroxy, nitro, cyano, amino, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>alkoxy, mono- and di-(C<sub>1</sub>-C<sub>4</sub>alkyl)amino, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, C<sub>1</sub>-C<sub>2</sub>haloalkyl and C<sub>1</sub>-C<sub>2</sub>haloalkoxy.

2. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein R<sub>8</sub> represents 0 or 1 substituent selected from halogen, C<sub>1</sub>-C<sub>2</sub>alkyl and C<sub>1</sub>-C<sub>2</sub>alkoxy.

3. A compound or pharmaceutically acceptable form thereof according to claim 1 or claim 2, wherein Ar is substituted with 0, 1, 2 or 3 substituents independently selected from halogen, hydroxy, amino, cyano, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>alkoxy, mono- or di-C<sub>1</sub>-C<sub>4</sub>alkylamino, C<sub>2</sub>-C<sub>4</sub>alkanoyl, (C<sub>3</sub>-C<sub>7</sub>cycloalkyl)C<sub>0</sub>-C<sub>2</sub>alkyl, C<sub>1</sub>-C<sub>2</sub>haloalkyl, and C<sub>1</sub>-C<sub>2</sub>haloalkoxy.

4. A compound or pharmaceutically acceptable form thereof according to claim 1 or claim 2, wherein Ar represents phenyl, pyridyl, thiazolyl, thienyl, triazolopyridyl, pyridizinyll or pyrimidinyl, each of which is substituted with from 0 to 4 substituents.

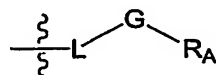
5. A compound or pharmaceutically acceptable form thereof according to claim 4, wherein Ar represents phenyl, pyridyl, thiazolyl, thienyl, triazolopyridyl, or pyridizinyll, each of which is substituted with from 0 to 3 substituents independently selected from chloro, fluoro, hydroxy, cyano, amino, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>alkoxy, C<sub>1</sub>-C<sub>2</sub>alkylamino, C<sub>1</sub>-C<sub>2</sub>haloalkyl and C<sub>1</sub>-C<sub>2</sub>haloalkoxy.

6. A compound or pharmaceutically acceptable form thereof according to claim 5, wherein Ar represents phenyl, 2-pyridyl, 1,3-thiazol-2-yl, 2-thienyl, [1,2,4]triazolo[4,3-a]pyridin-5-yl or 3-pyridiziny, each of which is substituted with from 0 to 3 substituents independently selected from fluoro, chloro, hydroxy, C<sub>1</sub>-C<sub>2</sub>alkyl, cyano, and C<sub>1</sub>-C<sub>2</sub>alkoxy.

7. A compound or pharmaceutically acceptable form thereof according to claim 5, wherein Ar represents pyridin-2-yl, 2,6-difluorophenyl, 2,5-difluorophenyl, 3-fluorophenyl, 3-methyl-[1,2,4]triazolo[4,3-a]pyridin-5-yl, 3-fluoropyridin-2-yl or 6-fluoro-pyridin-2-yl.

8. A compound or pharmaceutically acceptable form thereof according to any one of claims 1-7, wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub> are independently selected from:

- (a) hydrogen, halogen or cyano; and
- (b) groups of the formula:



wherein:

- (i) L is a single covalent bond, methylene or ethylene;
- (ii) G is a single covalent bond, NH, N(R<sub>B</sub>), O, C(=O)O or C(=O); and
- (iii) R<sub>A</sub> and R<sub>B</sub> are independently selected from (1) hydrogen and (2) C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, 4- to 7-membered heterocycloalkyl, phenyl, thienyl, pyridyl, pyrimidinyl, thiazolyl, imidazolyl, pyrazolyl, pyridazinyl and pyrazinyl, each of which is substituted with from 0 to 4 substituents independently selected from hydroxy, halogen, cyano, amino, C<sub>1</sub>-C<sub>2</sub>alkyl and C<sub>1</sub>-C<sub>2</sub>alkoxy.

9. A compound or pharmaceutically acceptable form thereof according to claim 8 wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub> are independently selected from hydrogen, hydroxy, halogen, cyano, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, C<sub>1</sub>-C<sub>2</sub>alkoxyC<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>hydroxyalkyl, C<sub>1</sub>-C<sub>2</sub>haloalkyl, C<sub>1</sub>-C<sub>2</sub>haloalkoxy, C<sub>1</sub>-C<sub>4</sub>carboxylate, mono- and di-(C<sub>1</sub>-C<sub>4</sub>alkyl)amino, phenylC<sub>0</sub>-C<sub>1</sub>alkyl, pyridylC<sub>0</sub>-C<sub>1</sub>alkyl and (4- to 7-membered heterocycloalkyl)C<sub>0</sub>-C<sub>1</sub>alkyl.

10. A compound or pharmaceutically acceptable form thereof according to Claim 9, wherein  $R_1$  and  $R_4$  are independently chosen from hydrogen, methyl and ethyl.
11. A compound or pharmaceutically acceptable form thereof according to claim 9, wherein  $Z_1$  is nitrogen,  $Z_2$  is  $CR_2$  and  $Z_3$  is  $CR_3$ .
12. A compound or pharmaceutically acceptable form thereof according to claim 11, wherein  $R_2$ ,  $R_3$  and  $R_4$  are independently chosen from hydrogen, halogen,  $C_1$ - $C_4$ alkyl and  $C_1$ - $C_4$ alkoxy,  $C_3$ - $C_7$ cycloalkyl,  $C_1$ - $C_2$ alkoxy $C_1$ - $C_2$ alkyl,  $C_1$ - $C_2$ hydroxyalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, phenyl $C_0$ - $C_1$ alkyl, pyridyl $C_0$ - $C_1$ alkyl and (4- to 7-membered heterocycloalkyl) $C_0$ - $C_1$ alkyl.
13. A compound or pharmaceutically acceptable form thereof according to claim 9, wherein  $Z_1$  is  $CR_1$ ,  $Z_2$  is nitrogen and  $Z_3$  is  $CR_3$ .
14. A compound or pharmaceutically acceptable form thereof according to claim 13, wherein  $R_1$ ,  $R_3$  and  $R_4$  are independently chosen from hydrogen, halogen,  $C_1$ - $C_4$ alkyl and  $C_1$ - $C_4$ alkoxy,  $C_3$ - $C_7$ cycloalkyl,  $C_1$ - $C_2$ alkoxy $C_1$ - $C_2$ alkyl,  $C_1$ - $C_2$ hydroxyalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, phenyl $C_0$ - $C_1$ alkyl, pyridyl $C_0$ - $C_1$ alkyl and (4- to 7-membered heterocycloalkyl) $C_0$ - $C_1$ alkyl.
15. A compound or pharmaceutically acceptable form thereof according to claim 9, wherein  $Z_1$  and  $Z_2$  are nitrogen and  $Z_3$  is  $CR_3$ .
16. A compound or pharmaceutically acceptable form thereof according to claim 15, wherein  $R_3$  and  $R_4$  are independently chosen from hydrogen, halogen,  $C_1$ - $C_4$ alkyl and  $C_1$ - $C_4$ alkoxy,  $C_3$ - $C_7$ cycloalkyl,  $C_1$ - $C_2$ alkoxy $C_1$ - $C_2$ alkyl,  $C_1$ - $C_2$ hydroxyalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, phenyl $C_0$ - $C_1$ alkyl, pyridyl $C_0$ - $C_1$ alkyl and (4- to 7-membered heterocycloalkyl) $C_0$ - $C_1$ alkyl.
17. A compound or pharmaceutically acceptable form thereof according to claim 9, wherein  $Z_1$  and  $Z_3$  are nitrogen and  $Z_2$  is  $CR_2$ .
18. A compound or pharmaceutically acceptable form thereof according to claim 17, wherein  $R_2$  and  $R_4$  are independently chosen from hydrogen, halogen,  $C_1$ -

C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy, C<sub>3</sub>-C<sub>7</sub>cycloalkyl, C<sub>1</sub>-C<sub>2</sub>alkoxyC<sub>1</sub>-C<sub>2</sub>alkyl, C<sub>1</sub>-C<sub>2</sub>hydroxyalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, phenylC<sub>0</sub>-C<sub>1</sub>alkyl, pyridylC<sub>0</sub>-C<sub>1</sub>alkyl and (4- to 7-membered heterocycloalkyl)C<sub>0</sub>-C<sub>1</sub>alkyl.

19. A compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 18 wherein R<sub>6</sub> and R<sub>7</sub> are both hydrogen.

20. A compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 19, wherein R<sub>5</sub> is C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, or mono- or di-C<sub>1</sub>-C<sub>4</sub>alkylamino, each of which is substituted with from 0 to 2 substituents independently selected from halogen, hydroxy, C<sub>1</sub>-C<sub>2</sub>alkoxy, C<sub>3</sub>-C<sub>8</sub>cycloalkyl, phenylC<sub>0</sub>-C<sub>2</sub>alkyl and phenylC<sub>1</sub>-C<sub>2</sub>alkoxy.

21. A compound or pharmaceutically acceptable form thereof according to claim 20 wherein R<sub>5</sub> is ethyl, propyl, butyl, ethoxy or methoxymethyl.

22. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein the compound is chosen from:

6-[2-(6-fluoro-pyridin-2-yl)-imidazol-1-ylmethyl]-5-propyl-imidazo[1,2-a]pyrazine;  
5-propyl-6-(2-pyridin-2-yl-imidazol-1-ylmethyl)-imidazo[1,2-a]pyrazine;  
6-[2-(3-fluoro-pyridin-2-yl)-imidazol-2-ylmethyl]-5-propyl-imidazo[1,2-a]pyrazine;  
6-[2-(6-fluoro-pyridin-2-ylmethyl)-1-methyl-5-propyl-imidazo[1,5-a]pyrazine;  
6-[2-(3-fluoro-pyridin-2-yl)-imidazol-1-ylmethyl]-1-methyl-5-propyl-imidazo[1,5-a]pyrazine;  
5-propyl-6-(2-pyridin-2-yl-imidazol-1-ylmethyl)-[1,2,4]triazolo[4,3-a]pyrazine;  
3-methyl-5-propyl-6-(2-pyridin-2-yl-imidazol-1-ylmethyl)-[1,2,4]triazolo[4,3-a]pyrazine;  
3-methyl-6-[2-(3-methyl-[1,2,4]triazolo[4,3-a]pyridin-5-yl)-imidazol-1-ylmethyl]-5-propyl-[1,2,4]triazolo[4,3-a]pyrazine;  
6-{{2-(3-fluoropyridin-2-yl)-1H-imidazol-1-yl}methyl}-5-propyl[1,2,4]triazolo[1,5-a]pyrazine; and  
6-{{2-(3-fluoropyridin-2-yl)-1H-imidazol-1-yl}methyl}-2-methyl-5-propyl[1,2,4]triazolo[1,5-a]pyrazine.

23. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein in an assay of GABA<sub>A</sub> receptor binding the compound exhibits an K<sub>i</sub> of 1 micromolar or less.

24. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein in an assay of GABA<sub>A</sub> receptor binding the compound exhibits an K<sub>i</sub> of 100 nanomolar or less.

25. A compound or pharmaceutically acceptable form thereof according to claim 1, wherein in an assay of GABA<sub>A</sub> receptor binding the compound exhibits an K<sub>i</sub> of 10 nanomolar or less.

26. A pharmaceutical composition comprising a compound or pharmaceutically acceptable form thereof according to claim 1 in combination with a pharmaceutically acceptable carrier or excipient.

27. A pharmaceutical composition according to claim 26, wherein the pharmaceutical composition is formulated as an injectible fluid, an aerosol, a cream, a gel, a pill, a capsule, a syrup, or a transdermal patch.

28. A method for the treatment of anxiety, depression, a sleep disorder, attention deficit disorder, or Alzheimer's dementia, comprising administering to a patient in need of such treatment a GABA<sub>A</sub> receptor modulatory amount of a compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 19.

29. A method for potentiating a therapeutic effect of a CNS agent, comprising administering to a patient a CNS agent and a compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 19.

30. A method for improving short term memory in a patient, comprising administering to a patient a GABA<sub>A</sub> receptor modulatory amount of a compound or pharmaceutically acceptable form thereof according to any one of claims 1 to 19.

31. A method for altering the signal-transducing activity of GABA<sub>A</sub> receptor, comprising contacting a cell expressing GABA<sub>A</sub> receptor with a compound or

pharmaceutically acceptable form thereof according any one of claims 1 to 19 in an amount sufficient to detectably alter the electrophysiology of the cell, and thereby altering GABA<sub>A</sub> receptor signal-transducing activity.

32. A method according to claim 31, wherein the cell recombinantly expresses a heterologous GABA<sub>A</sub> receptor, and wherein the alteration of the electrophysiology of the cell is detected by intracellular recording or patch clamp recording.

33. A method for determining the presence or absence of GABA<sub>A</sub> receptor in a sample, comprising the steps of:

- (a) contacting a sample with a compound or pharmaceutically acceptable form thereof according claim 1, under conditions that permit binding of the compound to GABA<sub>A</sub> receptor;
- (b) removing the compound or pharmaceutically acceptable form thereof that is not bound to GABA<sub>A</sub> receptor; and
- (c) detecting a level of the compound or pharmaceutically acceptable form thereof bound to GABA<sub>A</sub> receptor;

and therefrom determining the presence or absence of GABA<sub>A</sub> receptor in the sample.

34. A method according to claim 33, wherein the presence or absence of bound compound is detected using autoradiography.

35. A method for determining the presence or absence of GABA<sub>A</sub> receptor in a sample, comprising:

determining background binding by, in order:

- (a) contacting a first sample with a measured molar concentration of a labeled compound that is known not to bind to GABA<sub>A</sub> receptors, under conditions that permit binding of compounds to GABA<sub>A</sub> receptors;
- (b) washing the first sample under conditions that permit removal of compounds that are not bound to GABA<sub>A</sub> receptors; and
- (c) detecting as a background binding amount an amount of label remaining after washing;

and

determining GABA<sub>A</sub> binding by, in order:

- (d) contacting with a labeled compound or pharmaceutically acceptable form thereof according to claim 1 a second sample matched to the first sample, said compound or pharmaceutically acceptable form thereof being present at the measured molar concentration of (a) and said contacting being carried out under the conditions used in (a);
- (e) washing the second sample under the conditions used in (b),
- (f) detecting an amount of label remaining in the second sample after washing; and
- (g) subtracting the background binding amount determined in (c ) from the amount of label remaining in the second sample determined in (f)

wherein the remainder of a positive amount after the subtraction of (g) indicates the presence of GABA<sub>A</sub> receptor in the second sample.

36. A method according to claim 35 wherein the amount of label remaining after washing of the first sample and the second sample is detected using autoradiography.

37. A packaged pharmaceutical preparation comprising a pharmaceutical composition according to claim 26 in a container and instructions for using the composition to treat a patient suffering from anxiety, depression, a sleep disorder, attention deficit disorder, Alzheimer's dementia, or short-term memory loss.

38. The use of a compound or pharmaceutically acceptable form thereof according to claim 1 for the manufacture of a medicament for the treatment of a condition selected from anxiety, depression, a sleep disorder, an attention deficit disorder, Alzheimer's dementia, and short-term memory loss.